

numerous new and well chosen cuts is refreshing. Unquestionably the book is a valuable addition to elementary texts in botany and should find a wide field of usefulness in the hands of trained instructors.—LEROY H. HARVEY.

MINOR NOTICES

Nature sketches.—The chief scientific value of HANCOCK'S *Nature Sketches*⁴ is the large number of accurate and original observations upon insects and other animals in relation to their natural environments. The first chapter contains an unusually clear and simple discussion of problems and theories of evolution. Insect and bird pollination, and the relations of animals to flowers are discussed and beautifully and accurately illustrated, especially in the second chapter, by drawings, photographs, and colored plates of examples from temperate America. The adaptations of insects, birds, and flowers are discussed, and the author appears to be of the opinion that everything is useful. It is unfortunate that the idea of adaptation should be introduced without qualification into a popular work at a time when many botanists and zoologists regard it as doubtful. The chapters on "Animal behavior" and "Ecology" should have had less comprehensive titles. Though somewhat confused with faunistic geography, the first five pages of the chapter on ecology are devoted to a good summary of some of the important facts of genetic ecology. The lists of plant and animal habitats at the end of the book give the habitat preferences of a number of Orthoptera, but contain few elements of progress in ecological classification. The current classification has not been followed.⁵ In addition to its scientific value, the book is a good introduction to many aspects of natural history for the lay reader.—V. E. SHELFORD.

Popular manuals.—The nature and purpose of the very interesting *Cambridge manuals of science and literature* have been noticed in this journal.⁶ At that time five volumes dealing with plants had been published, and now two additional volumes have appeared: *Links with the past in the plant world*, by A. C. SEWARD (pp. 142); *Life in the sea*, by J. JOHNSTONE (pp. 150). The volumes are sold for one shilling each, and form for the general reader a readable résumé of current scientific knowledge. The titles of the eight chapters of Professor SEWARD'S volume will give a better conception of the contents than does the general title. They are as follows: "Longevity of trees, etc."; "The geographical distribution of plants"; "The geological record"; "Preservation of plants as fossils"; "Ferns, their distribution and antiquity"; "The redwood and mammoth trees of California"; "The Araucaria family";

⁴ HANCOCK, JOSEPH L., *Nature sketches in temperate America*. 8vo. xviii+451. pls. 12. figs. 215. Chicago: A. C. McClurg & Co. 1911. \$2.75.

⁵ PEARSE, in *Science* 34:37. 1912, is mistaken in this matter.

⁶ BOT. GAZ. 52:234. 1911.